

AMENDED CLAIM SET

The claims have been amended as set forth in the following listing of the claims:

Claims 1-9 (Canceled)

10. (Currently Amended) Ophthalmological examination and/or treatment station for a human patient's eye, comprising: (301) with
_____ an optical measuring arrangement; (312, 311, 309, 131) and
_____ an evaluation unit (317) connected to the latter in signaling terms; signalling terms,
wherein said optical measuring arrangement and said evaluation unit having a modular
configuration, said modular configuration further including,
_____ said modular configuration having
a patient module adapted to be positioned directly in front of the human patient's eye and
arranged remote from the evaluation unit; (303),
an illuminating device arranged remote from said patient module; (305),
a first optical fiber; fibre (304),
an observation device; (325a/b, 326a/b, 315, 322, 323) and
a second optical fiber fibre (309),
_____ said patient module (303) being positioned directly in front of the human patient's
eye (301) and being arranged remote from the evaluation unit (317);

~~_____~~ said illuminating device ~~(305)~~ being likewise arranged remote from said patient module ~~(303)~~;

wherein, ~~_____~~ said patient module is ~~(303)~~ being connected detachably by said first optical fiber ~~fibre (309)~~ with said illuminating device ~~(305)~~,

~~_____~~ said patient module has ~~(303)~~ having at least one first fiber ~~fibre~~ coupler part,

~~_____~~ said first optical fiber ~~has fibre (309)~~ having a first counterpart adapted to the at least one first fiber ~~fibre~~ coupler part for said detachable connection between the patient module ~~(303)~~ and the illuminating device ~~(305)~~,

~~_____~~ said illuminating device produces ~~(305)~~ ~~producing~~ a first radiation ~~conduetable~~ conductible with said first optical fiber ~~fibre (304)~~,

~~_____~~ the patient module has ~~(303)~~ having a first collimator ~~(310a)~~ interacting with the first optical fiber ~~fibre (304)~~ for converting said first radiation into a first free-space beam ~~(307)~~,

~~_____~~ said observation device is ~~(325a/b, 326a/b, 315, 322, 323)~~ being arranged in the patient module ~~(303)~~ and preferably being connected detachably to the evaluation unit ~~(317)~~,

~~_____~~ said optical measuring arrangement has said ~~device (312, 311, 309, 313)~~ having at least one second optical fiber ~~fibre (309)~~ guiding a second radiation,

~~_____~~ said patient module has ~~(303)~~ having a second collimator that converts ~~(310b)~~

~~_____~~ ~~said second collimator (310b) converting~~ said second radiation of said second optical fiber ~~fibre (309)~~ into a second free-space beam, and ~~(312)~~;

~~_____~~ said patient module has ~~(303)~~ having at least one second fiber ~~fibre~~ coupler part ~~(311)~~ and said second optical fiber ~~has fibre~~ having a second counterpart adapted to the at least one second coupler part for ~~doing~~ a detachable connection to said second collimator ~~(310b)~~.

11. (Currently Amended) Examination and/or treatment station according to claim 10, wherein said observation device is having a display element ~~(315) being~~ arranged on the patient module ~~(303)~~ and

said observation device has having a detachable electrical signal line ~~(316)~~ for a detachable connection between the display element ~~(315)~~ and the evaluation unit ~~(317)~~.

12. (Currently Amended) Examination and/or treatment station according to claim 10, wherein the observation device ~~(325a/b, 326a/b, 315, 322, 323)~~ is designed with an eyepiece ~~(323)~~ arranged in the patient module ~~(303)~~ and with an objective lens ~~(322)~~ for eye examination.

13. (Currently Amended) Examination and/or treatment station according to claim 10,

wherein the observation device ~~(325a/b, 326a/b, 315, 322, 323)~~ has an image detecting element ~~(CCD) (326a/b)~~ and an optical unit ~~(325a/b)~~,

said optical unit projects ~~(325a/b)~~ projecting an area of the eye to be examined onto said image detecting element ~~(326a/b)~~,

the image detecting element ~~(326a/b)~~ and optical unit are ~~(325a/b)~~ being arranged in the patient module ~~(303)~~.

14. (Currently Amended) Examination and/or treatment station according to claim 10, further comprising: having
_____ a holding device ~~(333)~~ for the patient module ~~(303)~~.

15. (Currently Amended) Examination and/or treatment station according to claim 10, wherein said evaluation unit is ~~(317)~~ being made computer-assisted for an evaluation or measurement of first data and

said examination and/or treatment station has ~~station having~~ data memories containing second retrievable data,

said optical measuring arrangement ~~(312, 311, 309, 131)~~ or said observation device is ~~(325a/b, 326a/b, 315, 322, 323)~~ being connected to said evaluation unit ~~(317)~~ for evaluating measuring data,

said examination and/or treatment station has ~~station having~~ a data network for connecting said evaluation unit ~~(317)~~ with said data memories, whereby

said evaluation unit is adapted to process ~~unit being able processing~~ said first and said second data.

16. (Currently Amended) Examination and/or treatment station according to claim 10, wherein

said optical measuring arrangement is ~~(312, 311, 309, 131)~~ being an optical arrangement of a Michelson interferometer type,

said optical measuring arrangement has ~~(312, 311, 309, 131)~~ having a radiation source ~~(9; 73; 92; 149; 191a-e)~~ emitting said second radiation,

said second radiation is ~~radiation being~~ a short-coherent radiation,

said optical measuring arrangement is ~~(312, 311, 309, 131)~~ being essentially a fiber-optical fibre-optical arrangement,

said optical measuring arrangement is ~~(312, 311, 309, 131)~~ having a measuring branch ~~(7; 72; 92; 157b)~~,

said measuring branch has ~~branch having~~ said second optical fiber ~~fibre~~ ~~(309)~~,

said second optical fiber transmits ~~fibre~~ ~~(309)~~ transmitting a first part of said short-coherent radiation ~~(second radiation)~~,

said measuring branch has ~~branch having~~ said second collimator ~~(310b)~~,

said first part of said short-coherent radiation is ~~(second radiation)~~ being converted by said second collimator into said second free-space beam,

said first and second free-space beam is ~~free-space beam being~~ directed at the human patient's eye as an optically transparent and/or diffusive reflecting object ~~(1, 1', 1''; 147; 205)~~,

said optical measuring arrangement has ~~(312, 311, 309, 131)~~ having a reference branch ~~(5; 67; 86a, 86b; 157a)~~,

said reference branch transmits ~~branch transmitting~~ a second part of radiation of said short-coherent radiation,

said reference branch has ~~branch having~~ a path length variation unit ~~(39; 55; 61; 71; 89; 161v)~~ for modifying a transit time of said second part of said short-coherent radiation in said reference branch;

said reference branch has ~~having~~ two reflectors,

_____ said reflectors divides said ~~dividing said~~ second part of said short-coherent radiation in a third and in a forth part, whereby said forth part getting a first optical path length is ~~length being~~ different to a second optical path length to said third part,

said measuring branch has ~~branch having~~ a measuring-branch-optical-fiber ~~fibre~~,

said measuring-branch-optical-fiber is ~~fibre being~~ disconnectable by fiber ~~fibre~~ coupling devices.

17. (Currently Amended) Examination and/or treatment station according to claim 16 wherein ~~said reference branch having at least two reflectors (31a, 31b; 49, 50; 57a, 57b; 87a, 87b; 161a-c; 161a-d),~~

said ~~at least~~ two reflectors are ~~being~~ retroreflectors.

18. (Currently Amended) Examination and/or treatment station according to claim 16, wherein

said optical measuring arrangement has ~~(312, 311, 309, 131)~~ having an optical element ~~(35; 61)~~ in said reference branch ~~(5)~~, which optical element covers the reflectors ~~(31a, 31b; 57a, 57b)~~ in succession with said second radiation.

19. (Currently Amended) Examination and/or treatment station according to claim 13, wherein

said image detecting element ~~(326a/b)~~ and said optical unit ~~(325a/b)~~ are formed in a pair
and

the pair parts are arranged at a distance from one another in order to permit stereoscopic observation.

20. (Currently Amended) Examination and/or treatment station according to claim 14, wherein

said holding device is ~~(333) being~~ designed as an aligning device for positioning in front of the human patient's eye ~~(301)~~.

21. (Currently Amended) Examination and/or treatment station according to claim 10, wherein

said patient module has ~~(303) having~~ a geometric design in the order of size of a contact lens in order to take up only a small area of space in front of the patient.

22. (Currently Amended) Examination and/or treatment station according to claim 10, wherein

said patient module ~~(303)~~ takes place only of just one apparatus but by its integration into said modular configuration achieving a functionality of a number of different individual apparatus.

23. (Currently Amended) Examination and/or treatment station according to claim 17, wherein

said ~~at least two reflectors~~ are being offset in said reference branch at a different depth.

24. (Currently Amended) Examination and/or treatment station according to claim 23~~claim 17~~, wherein

said at least two reflectors are offset ~~being offset~~ in said reference branch at a different depth and are movable ~~being movable~~ with one another for generating together a transit time modification and transit time difference.

25. (New) Examination and/or treatment station according to claim 10, wherein said observation device is connected detachably to the evaluation unit.